COST ANALYSIS

In order to develop a preliminary cost estimate associated with the RIDS project the various potential projects have been analyzed on a subregional basis. Table 20 presents the costs of each subregion's proposed irrigation water resources projects as previously described. The costs for each subregion consider the cost of financing the initial project capital costs, including assumptions about potential grand funding, and annual operations and maintenance expenses. These costs are then divided by the expected production of irrigation water resources for the identified projects to determine the average cost of the irrigation water resources for each subregion. As shown in the summary below, the average cost of the irrigation water resources as identified herein range from $0.48 to $0.57 per one thousand gallons.

These cost estimates as summarized on a subregional basis include the itemized construction costs for the various wells, pumping stations and pipelines that make up the projects, including engineering costs and contingencies. In order to develop estimates of the annual cost per gallon associated with the output from each project and region we have assumed that the initial capital cost will be financed partially from loan agreements with the FDEP's State Revolving Fund (SRF) Loan Program and partially with grants from EPA, the South Florida Water Management District, and the Governor's Program. In order to estimate the debt service for each project the following assumptions and considerations were relied upon:

- For each subregion, we have assumed that $3,500,000 in grants from EPA, the South Florida Water Management District, and the Governor's Program, would be available to offset the initial capital costs annually for up to four years but never totaling more than fifty percent (50%) of the subregion's initial capital project cost.

- The initial project costs to be financed with debt will be financed over a twenty (20) year period at a rate of 3.5%;

- The cost to be financed includes administrative fees equal to two percent (2%) of the initial project capital costs as required by the terms and conditions of the SRF Loan Program;

- The cost to be financed includes funding of a loan repayment reserve equal to three percent (3%) of the initial project capital costs being borrowed as required by the terms and conditions of the SRF Loan Program, and

- The cost to be financed includes twenty-four (24) months of capitalized interest based upon construction funding draws during the assumed project engineering and construction period.

- Total capital costs for each subregion include debt service and an allowance for debt service coverage equal to 25% of the annual debt service.

- The allowance for debt service coverage is based upon the SRF Loan Program's minimum debt service coverage requirement of 15% adjusted upward to also reflect the need for funding capital renewals and replacements that may occur during the term of the loan agreement.

In order to estimate the cost of each subregion's irrigation water resource projects an estimate of annual operations and maintenance costs was also considered. The annual operations and maintenance costs estimated for each RIDS project include:

- The cost of electricity for pumping;
- General maintenance of the facilities;
- Submersible pump maintenance;
- Adjustment of injection rates and measurement of water quality;
- Weekly water sample procurement for laboratory analysis;
- Semiannual calibration of flowmeters and gauges;
- Preparation of monthly regulatory reports; and
- Cost for chemicals, pretreatment, and filtration prior to injection.

The annual operations and maintenance costs were added to the annual capital related financing costs to estimate the total costs for each project and subregion. In order to calculate the cost per gallon for each subregion it was assumed that the total annual production of each project would be approximately equal to 180 days of production based on the project capacity measured on an average daily basis. An additional line is shown for the cost per thousand gallons assuming no grant funding is available. This is displayed for informational purposes only.

Table 20
Summary of Total Costs by Subregion

Subregion	1	2	3	4	5
	Gator Slough Horseshoe Canal Hermosa Canal Cape Coral/Water-Way Estates/ N. Fort Myers	Ft. Myers Central & South/Gateway/ Lehigh Acres	Ten Mile Canal GES/ Fiesta Village/ Fort Myers Bch.	Cocohatchee & Imperial Rivers Golden Gate Canal (SW 17th Ave.) North Collier/ Pelican Bay/ Bonita Springs	Golden Gate Canal (Airport Road) Faka Union Slough Naples/South Collier/ Marco
Annual Debt Service	$1,027,900	$605,100	$1,031,700	$3,622,600	$5,119,800
Debt Service Coverage(1)	256,975	151,275	257,925	905,650	1,279,950
Annual O & M Costs (2)	303,251	160,617	299,684	761,536	909,129
Total	$1,588,126	$916,992	$1,589,309	$5,289,786	$7,308,879
Production:					
MGD	18.4	9.0	17.0	51.5	72.1
Average Days Per Year	180	180	180	180	180
Annual gallons (000)	3,312,000	1,620,000	3,060,000	9,270,000	12,978,000
Cost per 1000 gallons	$0.48	$0.57	$0.52	$0.57	$0.56
Cost per 1000 gallons w/out grant funding	$0.87	$1.03	$0.94	$0.72	$0.67

(1) The debt service coverage funding amounts shown represent an allowance of 25% of the annual debt service based on the SRF Loan Program's minimum coverage requirement of 15% adjusted upward to also reflect the need for funding certain renewals and replacements that may occur during the term of the loans.

It is important to note that any preexisting deficiencies at the treatment plants considered in this study were not included in this analysis. It was assumed that all plants would be providing the appropriate treatment to meet primary and secondary standards. All background information can be found in Attachment G.